



OFFICE OF THE PURCHASING AGENT

TOWN OF ARLINGTON  
730 Massachusetts Avenue  
Arlington, MA 02476

Telephone (781) 316-3003  
Fax (781) 316-3019

DATE: August 30, 2012

TO ALL BIDDERS

BID NO. 12-39

SUBJECT: Design Services-Robbins Library Slate Roof Replacement

ADDENDUM NO. 1

TO WHOM IT MAY CONCERN:

With reference to the bid request relative to the above subject, please note the following:

A SITE VISIT WILL BE HELD ON WEDNESDAY SEPTEMBER 5, 2012 AT 10:00 A.M. AT THE ROBBINS LIBRARY, 700 MASSACHUSETTS AVE., ARLINGTON, MA. ALL INTERESTED BIDDERS WILL MEET AT THE MAIN ENTRANCE.

ATTACHED STUDY BY THE THOMPSON & LICHTNER COMPANY.

BIDDER MUST ACKNOWLEDGE ADDENDUM WITH SUBMISSION

All other terms, conditions and specifications remain unchanged.

Very truly yours,

Town of Arlington

  
Domenic R. Lanzillotti  
Purchasing Officer

THE THOMPSON & LICHTNER COMPANY, INC.

Consulting Engineers

Engineering and Testing Laboratories

111 First Street Cambridge, Massachusetts 02141 Tel (617) 492-2111  
Fax (617) 492-5448

PROGRESS REPORT

October 9, 2008

FOR Robbins Library, 700 Mass Avenue, Arlington, MA  
PROJECT Robbins Library  
SUBJECT Evaluation of Slate Roof

PROJECT NO. 34618

REPORT NO. 1

SHEET NO. 1 Of 3

On the above date the undersigned visited the above named project to evaluate the Slate Roof. The following comments summarize our observations.

I. Observations

Our observations were made with the use of field glasses and an aerial lift provided by the Town of Arlington Tree Department. We observed much of the same condition throughout the majority of the slate roof with the exception of the new addition built in the 1990's. The following comments summarize our observations on each elevation. Attached is a roof plan which references 13 sheets of photographs.

A. North Elevation

From the starter course of slate at the roof edge and up approximately 10' feet we observed all spaces between slates either caulked or cemented with asphalt. Also observed in this same area were many cracked slates. Slates that were replaced were held in place by clipping not fastening and they are sliding down out of position in many areas.

Also we observed the copper hip caps to be poorly fastened as well as caulked at the fastener holes in the copper. The copper also appears to be significantly oxidized and pitted. The new-lead coated copper gutter needs cleaning. We found excessive slate debris in the gutter (slate pieces, dust, ETC).

B. South Elevation

This elevation is the mirror image of the conditions and observations of the north elevation. We observed approximately the first 20 courses or 10' feet of slate with caulking and/or cement between every slate. Excessive wear appears on the face side of slate as well as some shrinking and scaling. We also observed repaired slates poorly clipped into position and sliding down with some missing and broken. This elevation appears to have the least amount of broken and missing slate of all elevations examined.

C. East Elevation

This elevation is the largest area of all the roofs examined. This elevation has the same conditions as the north and south elevations where the first 20 courses of slate (Bottom

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10' feet of slate from gutter) has been caulked or cemented with asphalt between every slate, broken, missing and cracked slates were also observed.

On this elevation at the top of the slate roof but below the copper ridge line at the flat EPDM roof there are copper outlet pans or scupper that drain the upper roof and we observed heavy oxidation, pitting and pin holes in the copper outlets (scuppers) at this elevation. We also observed cracks and exposed nails at the solder joints of the new lead coated copper gutters.

D. Rear Addition/West Elevation

On this addition the gutters are made of red copper and do not match the lead coated copper gutters on rest of the existing elevations. The gutters appear to be poorly fabricated and are also oxidizing in areas. Also they need to be cleaned to properly work. We observed excessive slate pieces and dust as well as other debris inside the gutters and downspouts leading to the drain pipes.

The bottom courses of slate have also been caulked or cemented with asphalt between the slates, however this repair does not appear to exceed the first 15 courses or 8' feet of the roof edge starting from the gutter upward. Repaired slate using copper clips poorly installed was observed, cracked slate, and broken slate. Much of the broken slates were observed near the snow fence. The snow fence also appears to be in poor visual condition and the structural condition appears satisfactory. There were also numerous broken slates surrounding the chimney base. We could not get close enough to the roof to examine the copper step flashing of the chimney or parapet walls. However the copper Counterflashing through old and patina in color appear satisfactory.

II. Comments

- A. The spaces between the existing slates appear excessive. The spaces have been caulked from the gutter approximately 1/3 the way up to the ridge on all elevations. The slate appears worn and the amount of debris found in the gutter the slate appears to be scaling in areas. Many repairs have been poorly executed. Most repairs made using copper clips to hold the slate into position. Slater's cement should be applied to the slate beneath the one being replaced. It appears this method was not used. The problem with clipping slate is after time with snow and ice dragging downwards on the slates the clips bend, therefore the slate fall out of position or completely fall out. We

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spoke with the maintenance manager from the Town of Arlington and he knew of no leaks.

With the repairs made between the slates and the extent of the repairs it would be in the best interest to replace the entire slate-roof. The amount of cemented slates at the lower edge to be removed for repairs would be almost as extensive as replacing the entire roof. There would be a high amount of waste and breakages to the slate for a repair estimate also color matching would be difficult. The repairs would be very obvious from the ground.

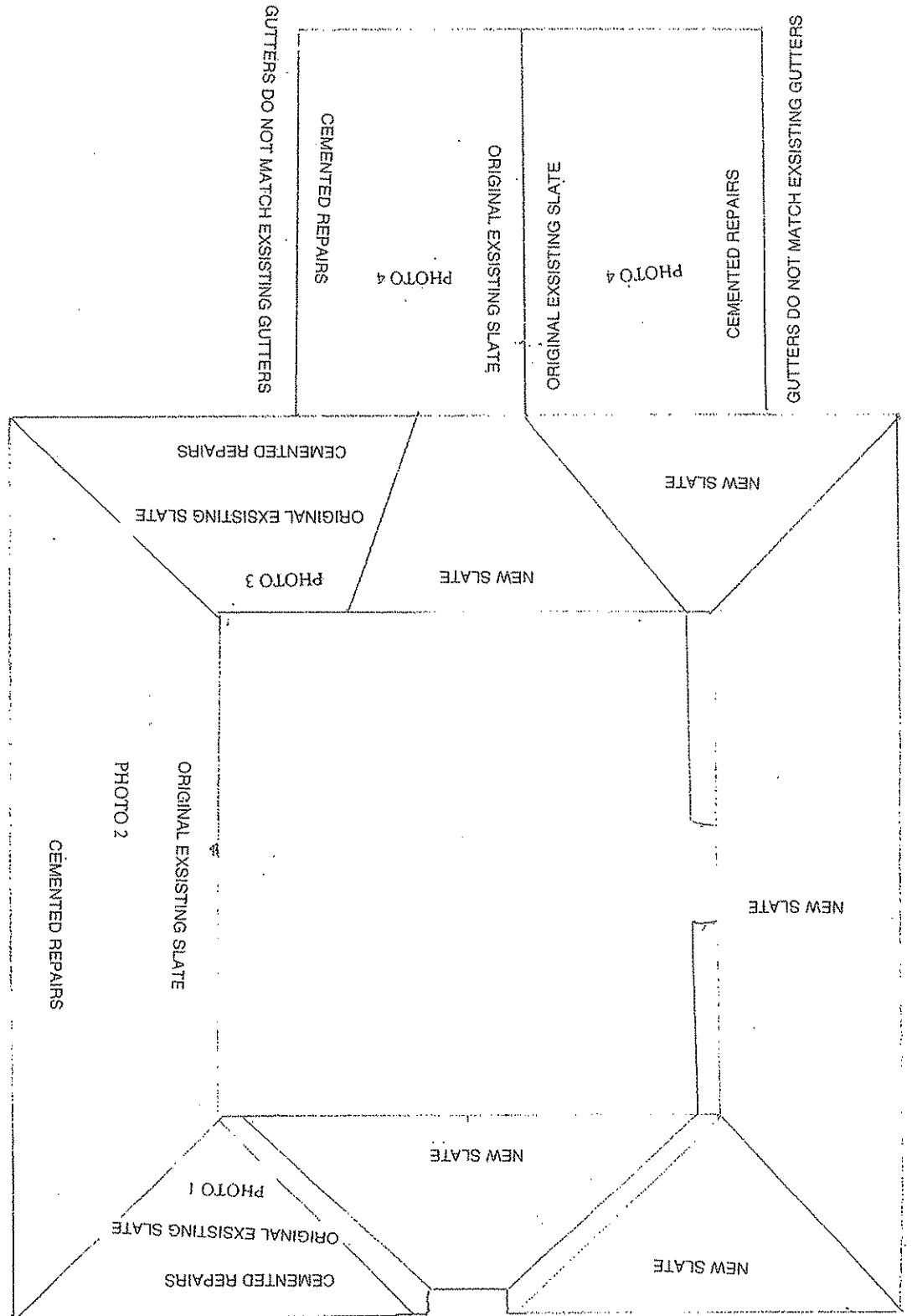
We were not able to get close enough to the roof with the aerial lift to completely inspect all the copper flashings, however if the roof was to be replaced it would be best to replace any all or all valley or step flashings. The counter flashing on the parapet walls and chimneys appear satisfactory, however the age of the counter flashing is unknown. Possibly the original flashing! We would recommend replacing the counter flashing if the roof were to be replaced do to the fact the contractor would be set up to replace them to do this. Replacement later would be much more expensive, mainly due to mobilization.

In order to properly replace the slate roof it would require staging the building to the gutter edge at any elevation to be replaced. Currently at this time using Union Labor the rate to replace slate per roofing square (100" sq ft) is approximately three thousand dollars per sq ft. An estimated cost to replace the slate roof on the original building and the rear wing addition would be approximately \$285,000 dollars including staging, materials and labor. This would also include new copper flashings and copper hip caps.

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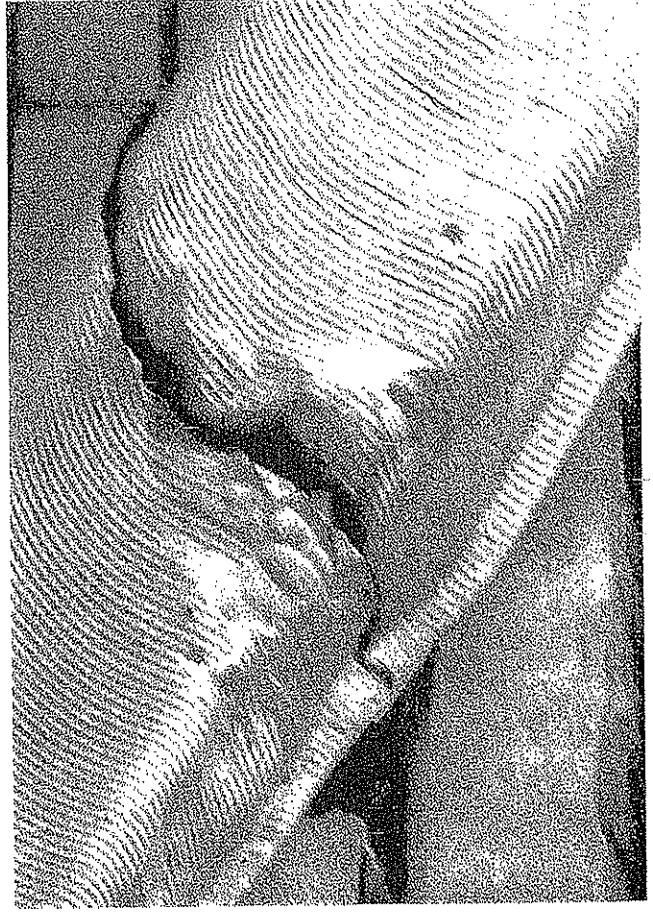
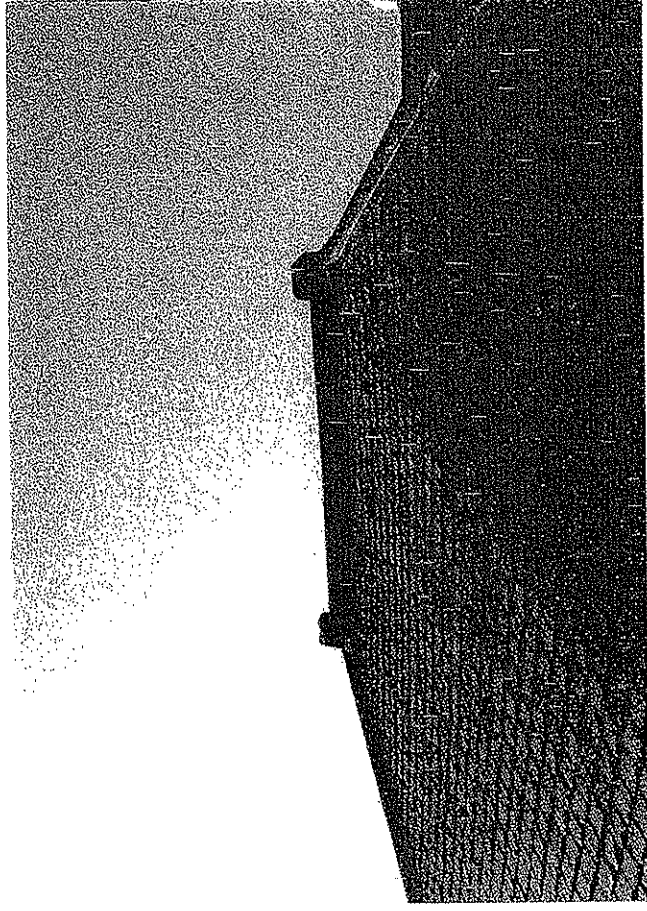
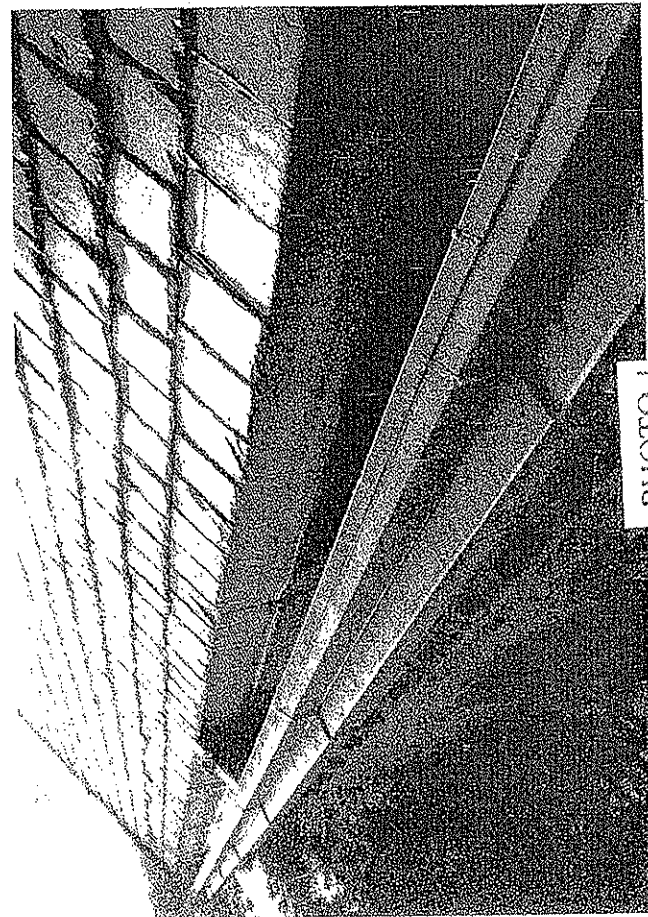
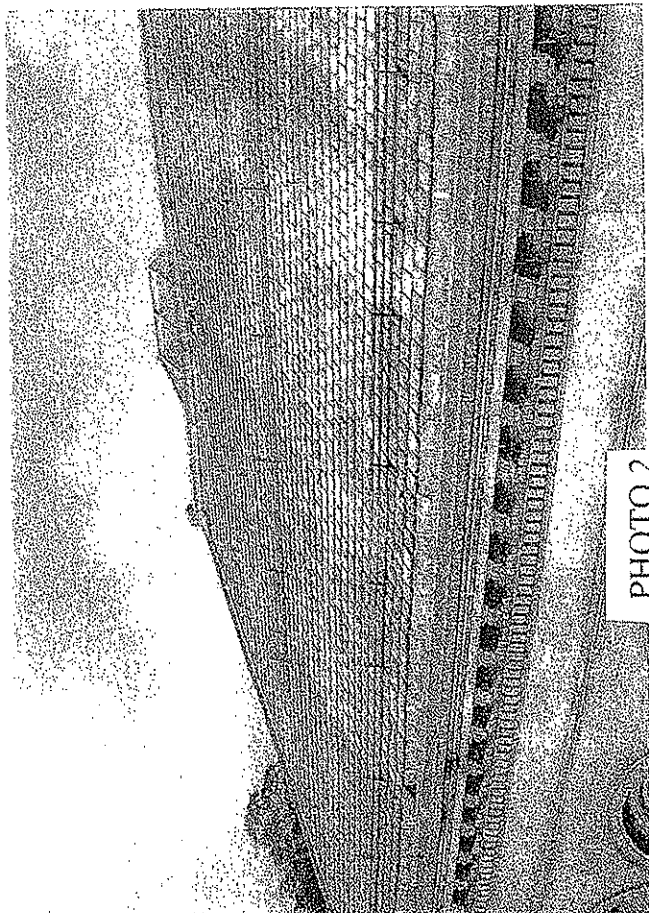
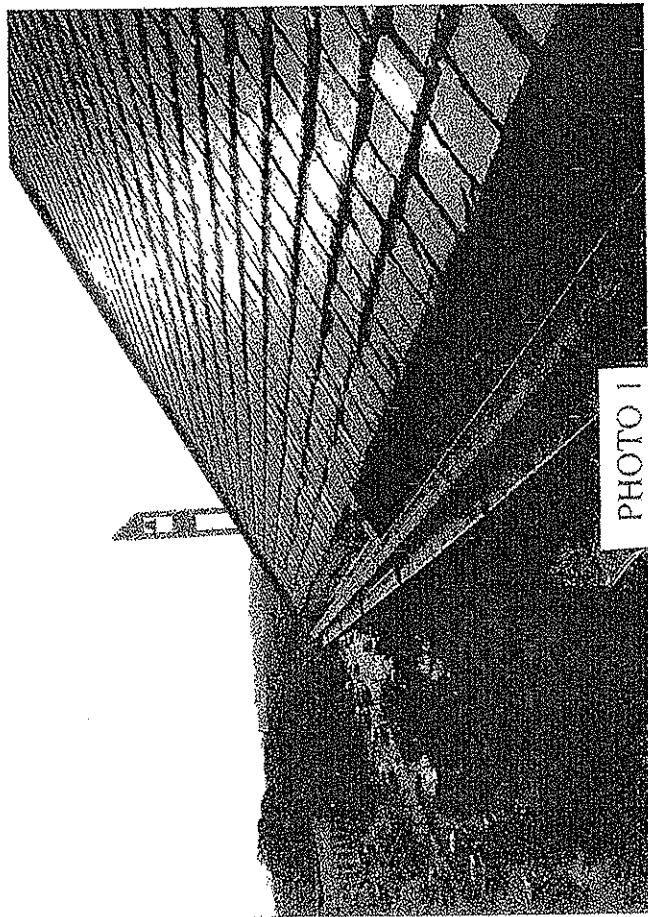


PHOTO 1



PHOTO 1



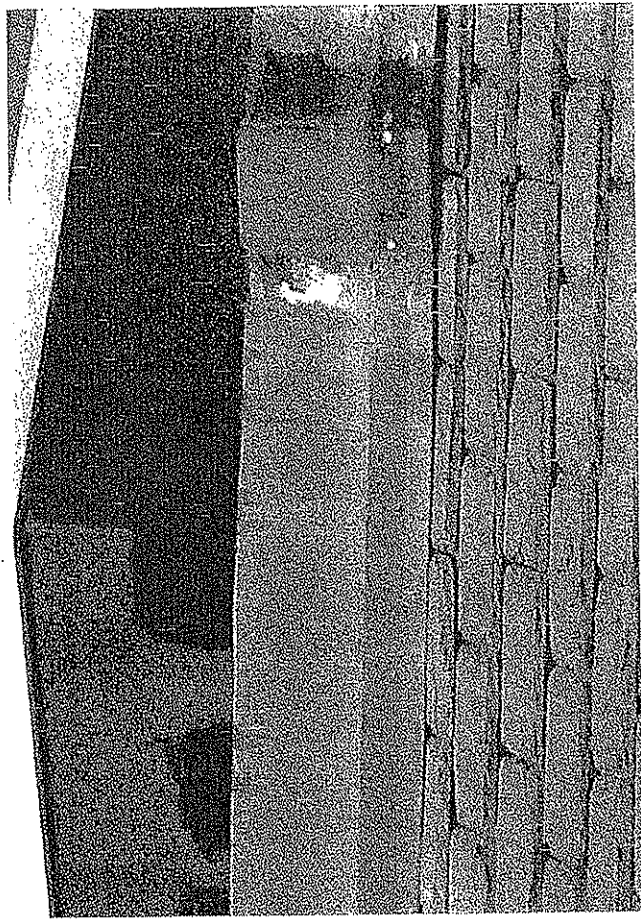
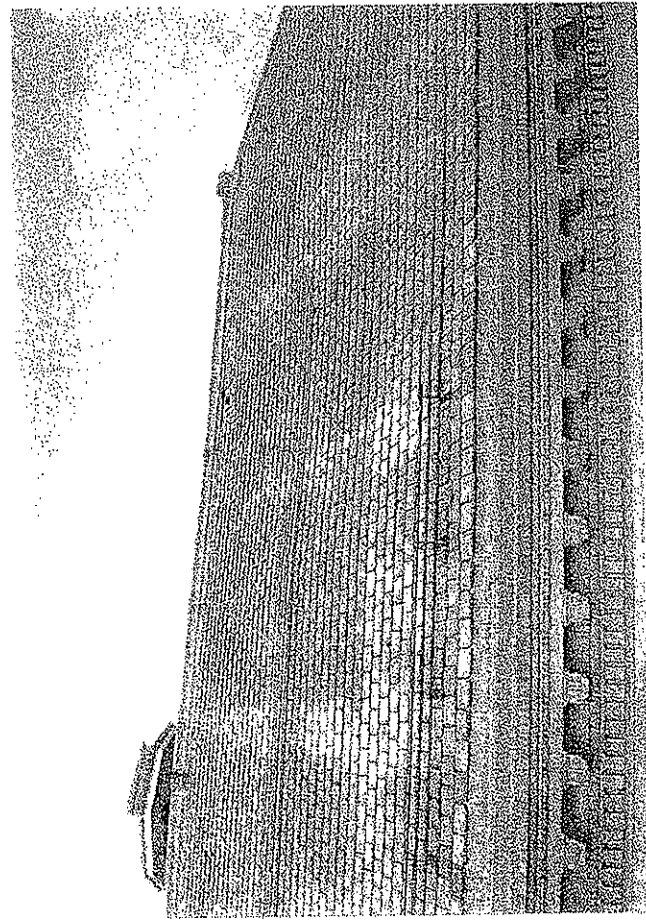


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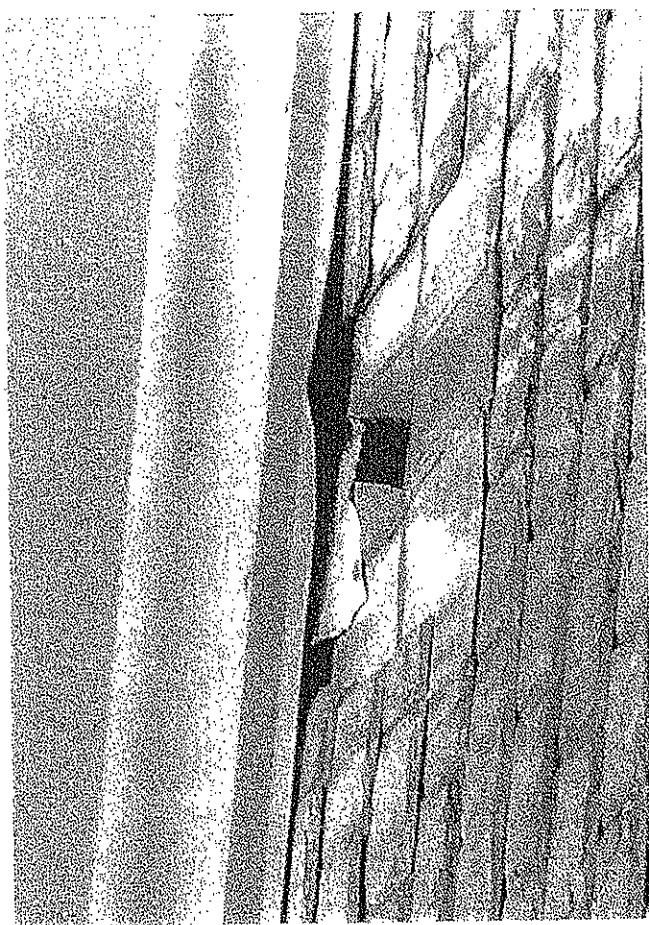
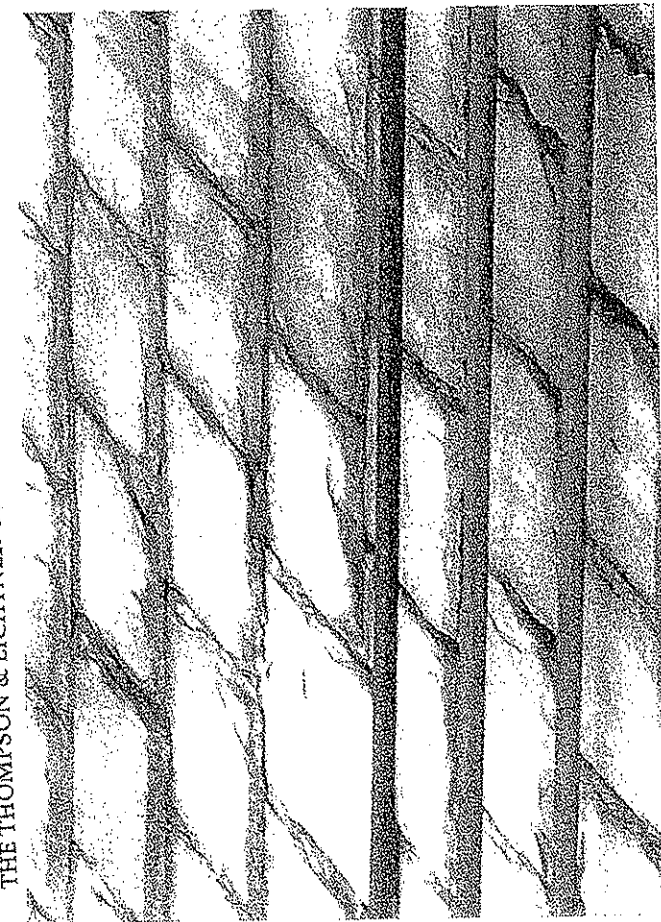


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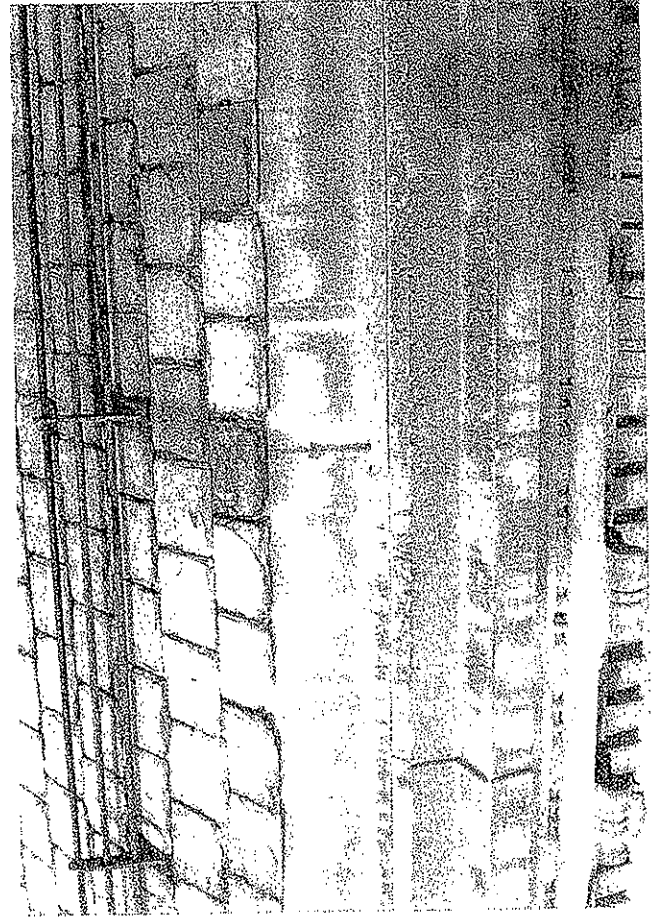


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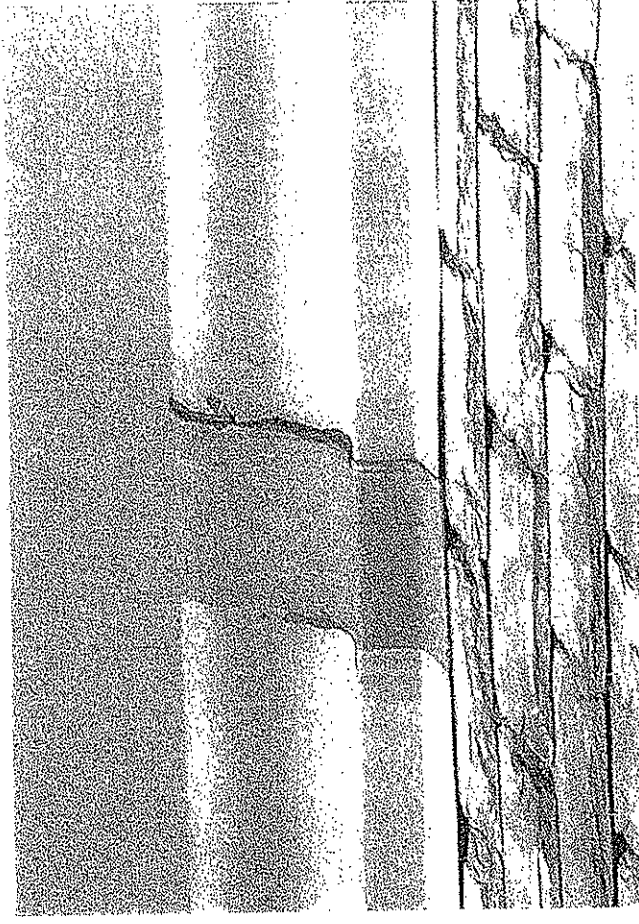
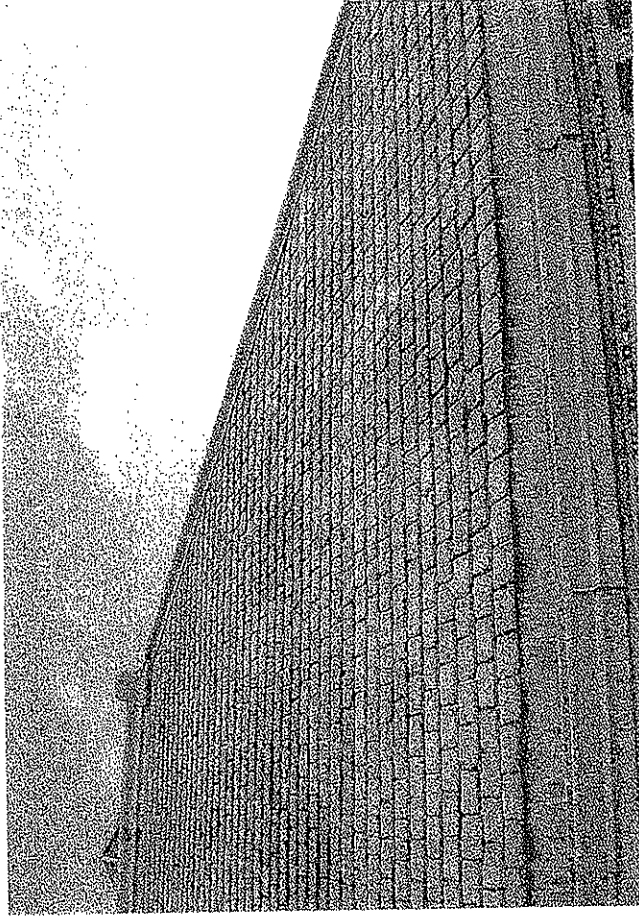


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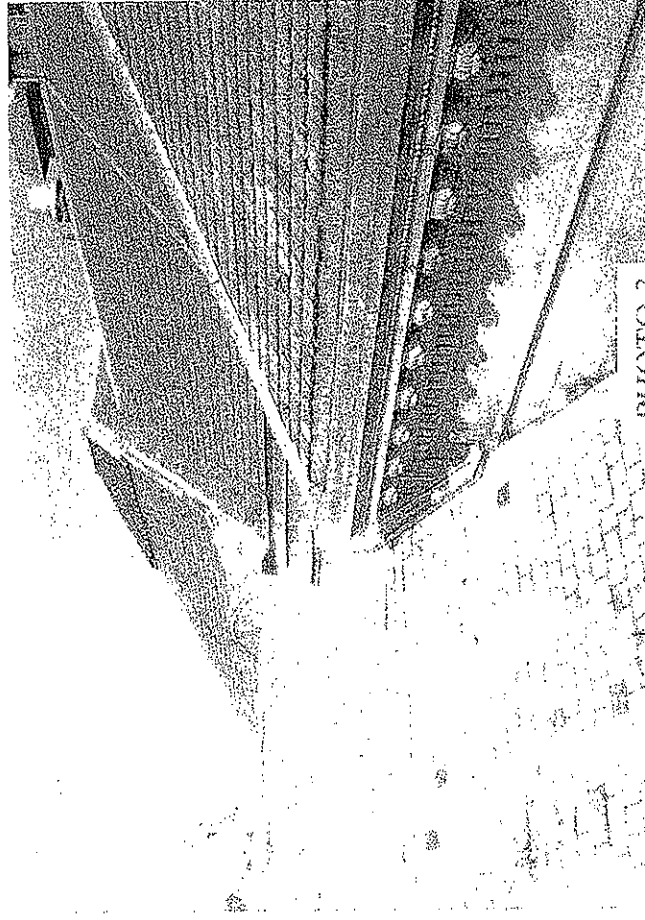


PHOTO 3



PHOTO 3

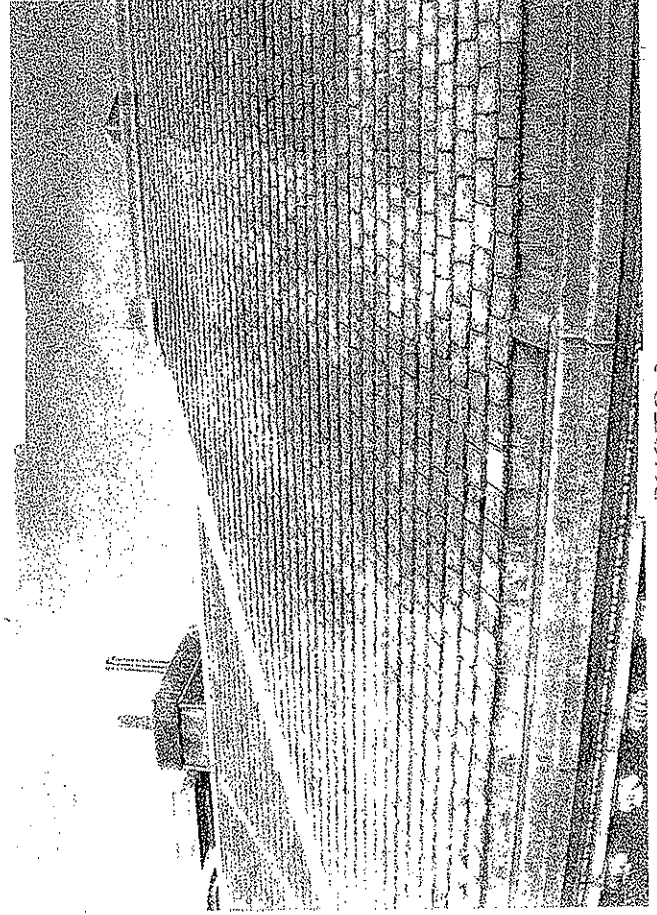


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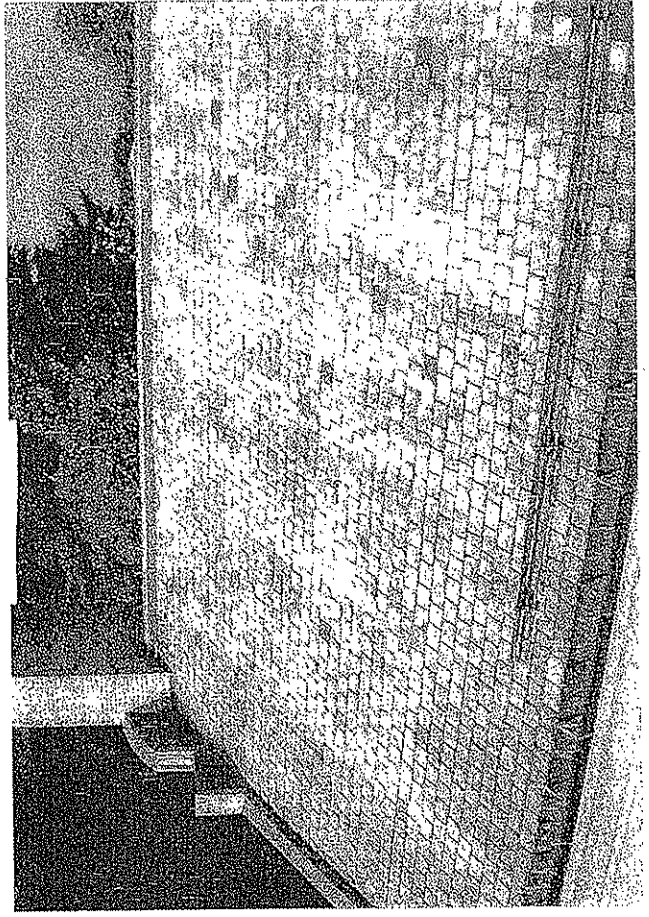


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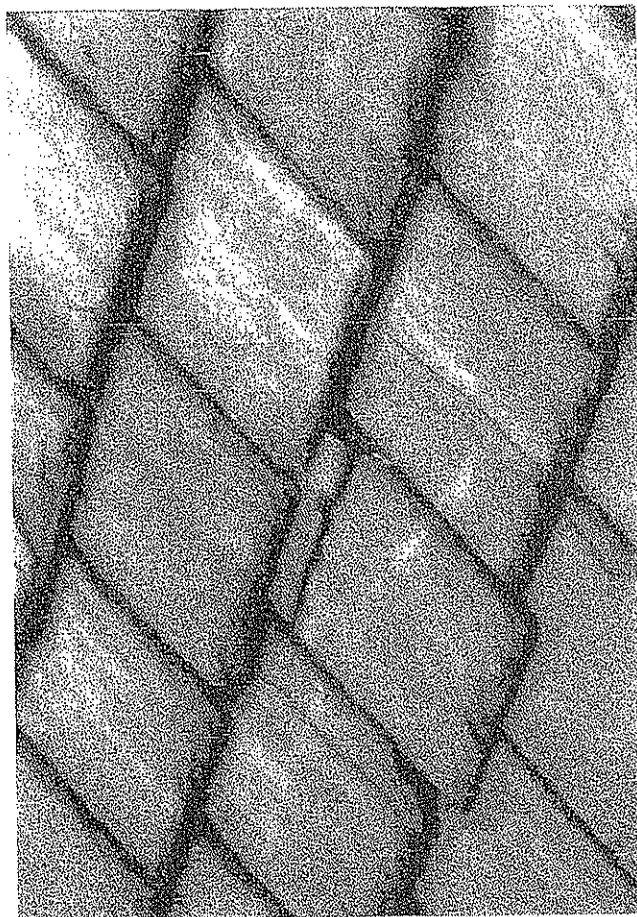
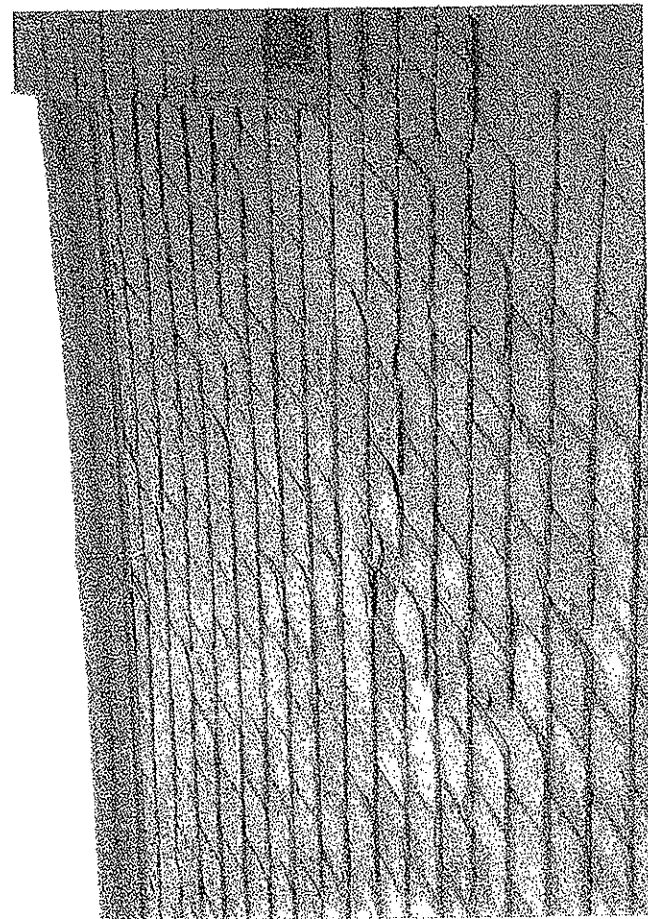
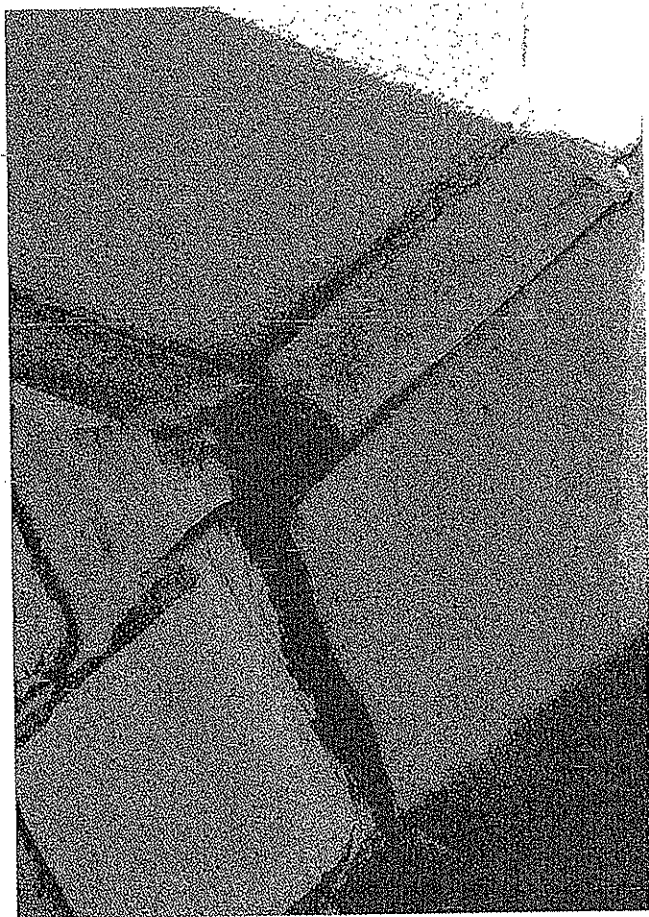
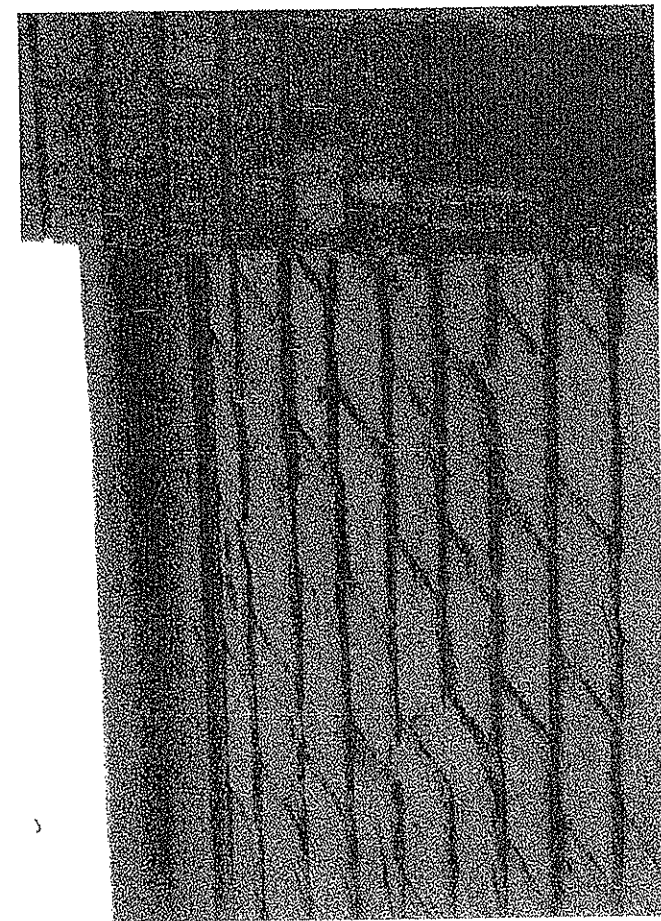


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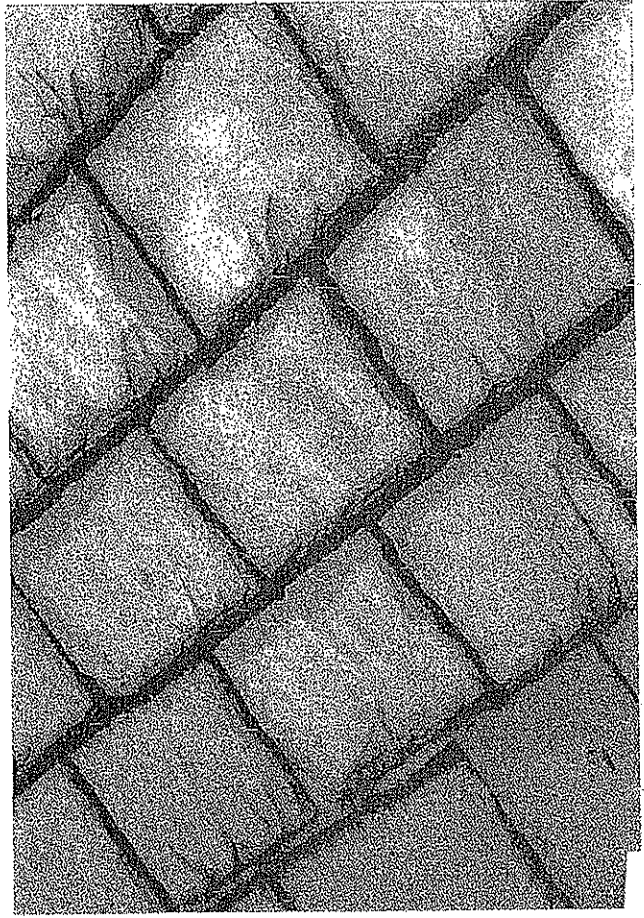
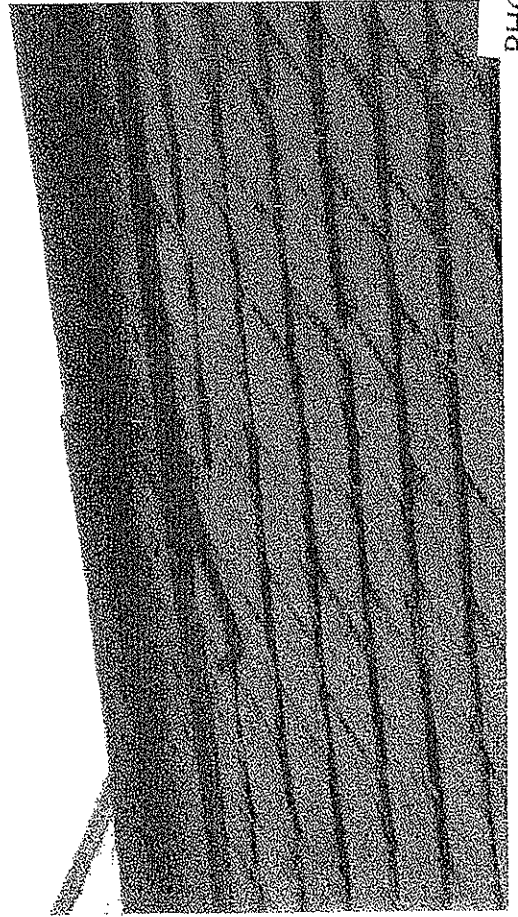
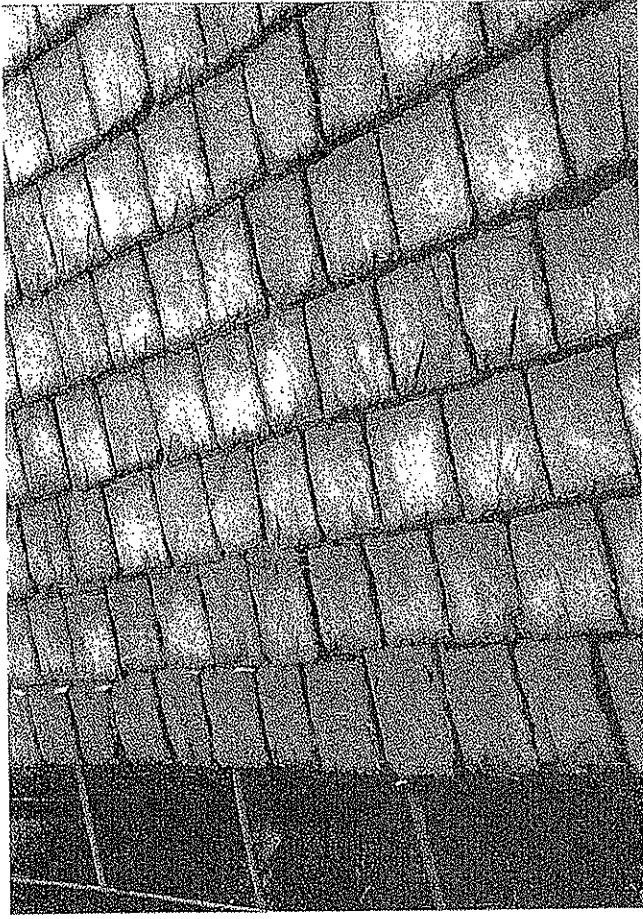
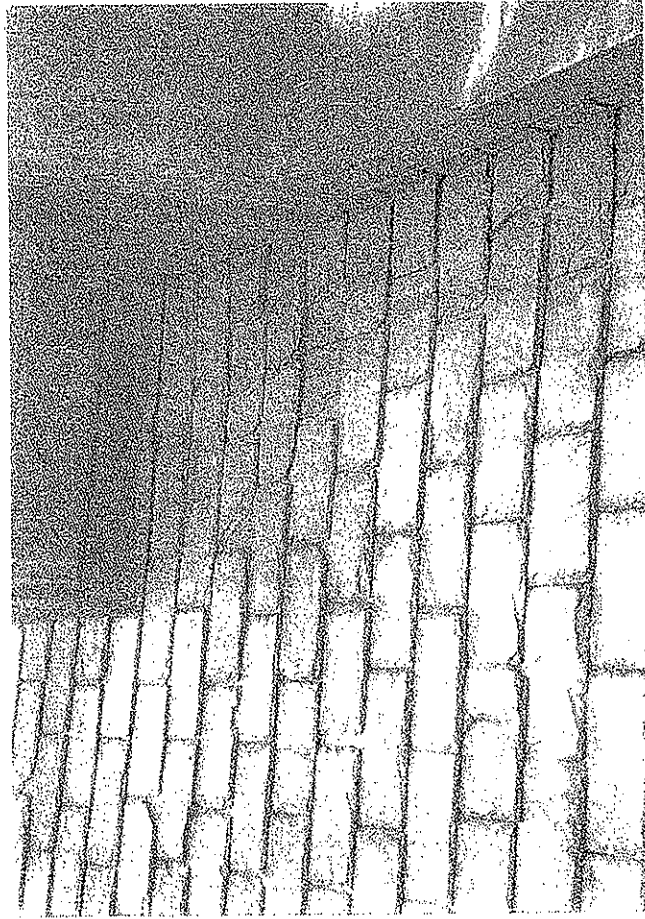


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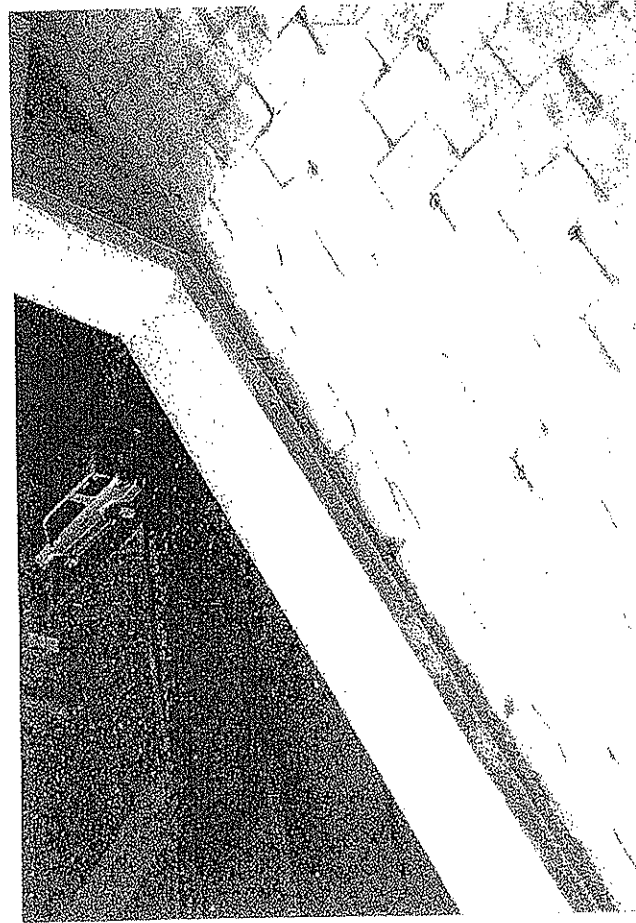


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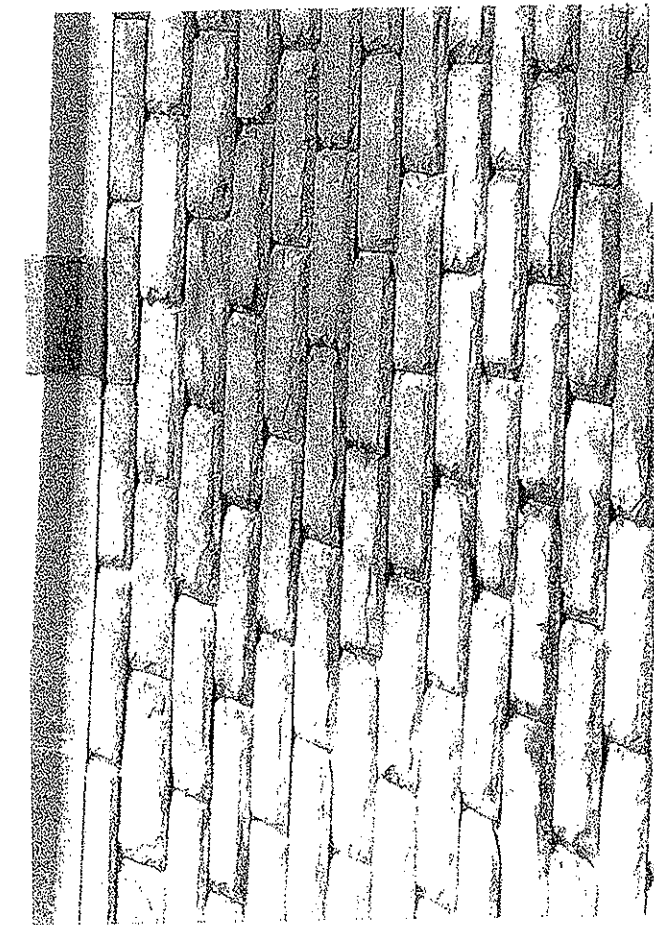
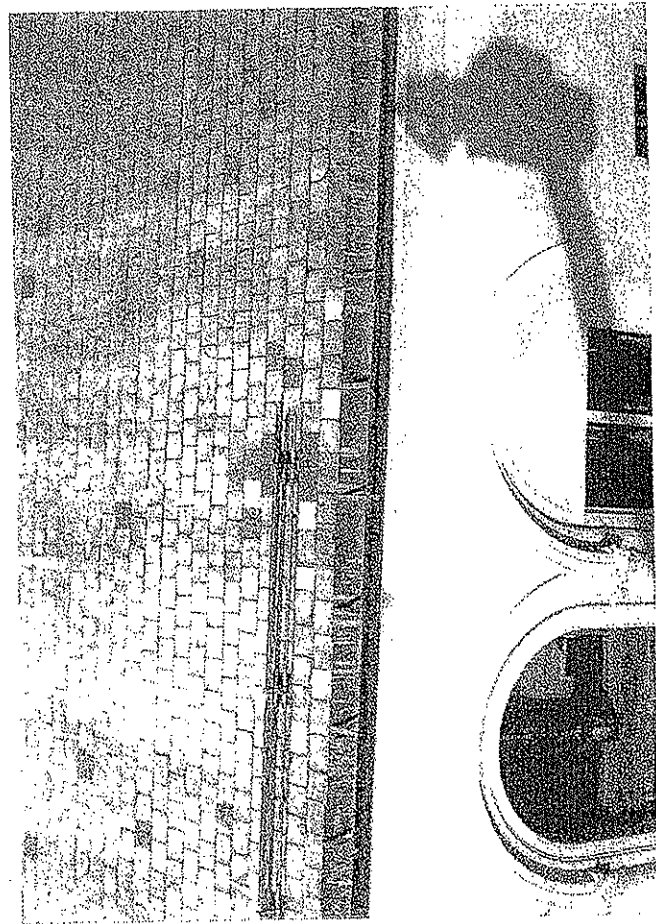


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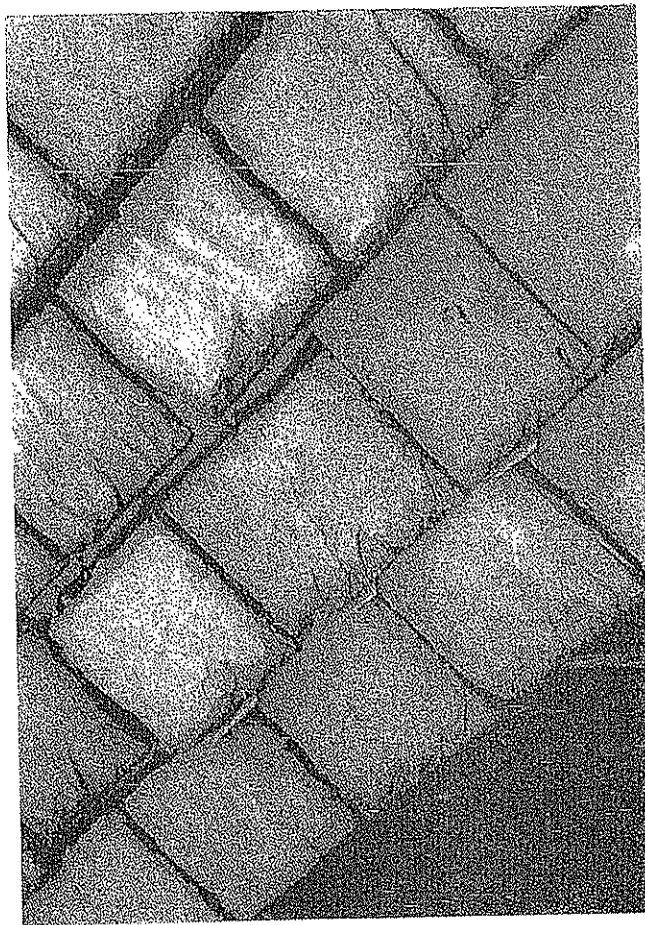
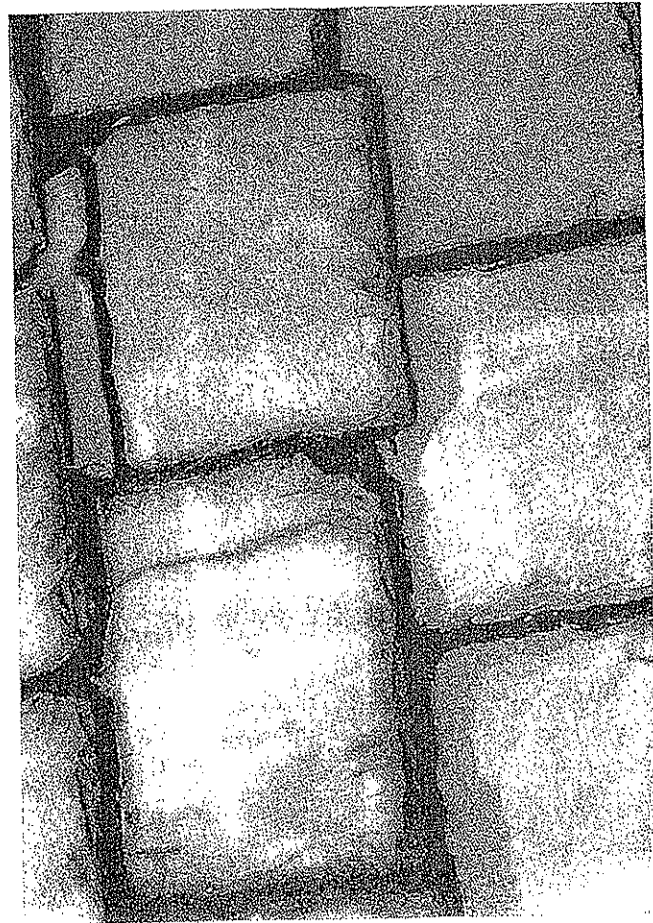
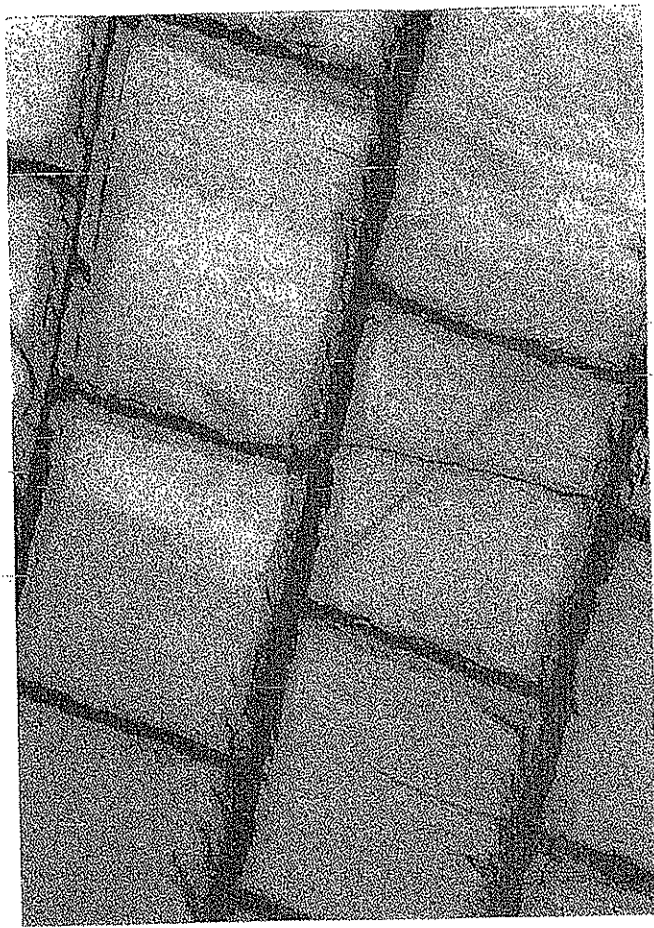
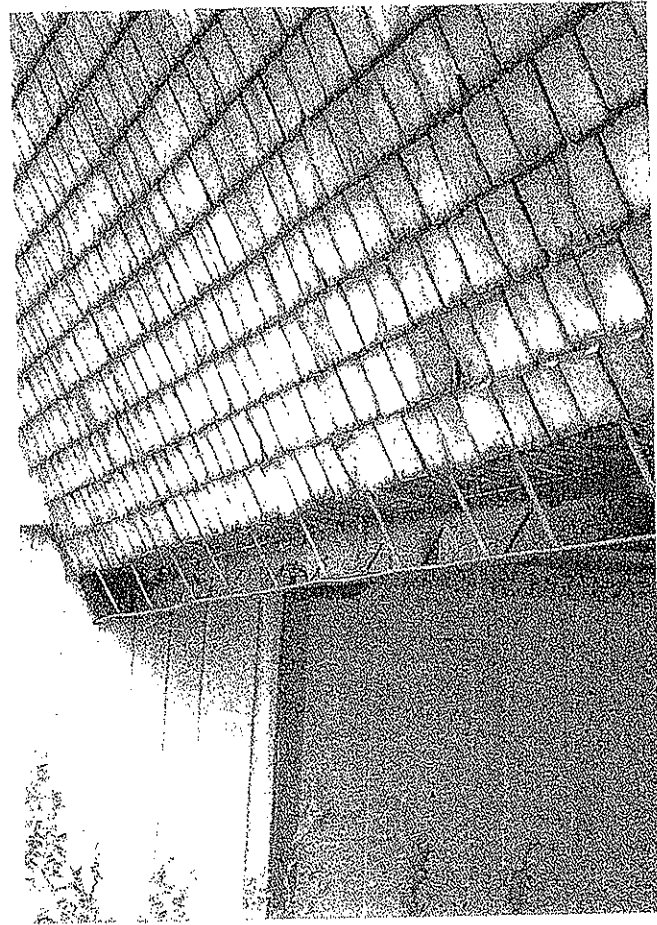


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